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UTILITY PATENT APPLICATION TRANSMITTAL (Only for new nonprovisional applications under 37 CFR 1.53(b))		Attorney Docket No.	35.C14206
		First Named Inventor or Application Identifier	
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		Express Mail Label No.	
APPLICATION ELEMENTS See MPEP chapter 600 concerning utility patent application contents.		ADDRESS TO: Assistant Commissioner for Patents Box Patent Application Washington, DC 20231	
1. <input type="checkbox"/> Fee Transmittal Form (Submit an original, and a duplicate for fee processing)		6. <input type="checkbox"/> Microfiche Computer Program (Appendix)	
2. <input checked="" type="checkbox"/> Specification Total Pages <input type="text" value="31"/>		7. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)	
3. <input checked="" type="checkbox"/> Drawing(s) (35 USC 113) Total Sheets <input type="text" value="9"/>		a. <input type="checkbox"/> Computer Readable Copy	
4. <input checked="" type="checkbox"/> Oath or Declaration Total Pages <input type="text" value="1"/>		b. <input type="checkbox"/> Paper Copy (identical to computer copy)	
a. <input type="checkbox"/> Newly executed (original or copy)		c. <input type="checkbox"/> Statement verifying identity of above copies	
b. <input checked="" type="checkbox"/> Unexecuted for information purposes			
c. <input type="checkbox"/> Copy from a prior application (37 CFR 1.63(d)) (for continuation/divisional with Box 17 completed) [Note Box 5 below]			
i. <input type="checkbox"/> DELETION OF INVENTOR(S) Signed Statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).			
5. <input type="checkbox"/> Incorporation By Reference (useable if Box 4c is checked) The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4c, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.			
ACCOMPANYING APPLICATION PARTS			
8. <input type="checkbox"/> Assignment Papers (cover sheet & document(s))			
9. <input type="checkbox"/> 37 CFR 3.73(b) Statement (when there is an assignee) <input type="checkbox"/> Power of Attorney			
10. <input type="checkbox"/> English Translation Document (if applicable)			
11. <input type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449 <input type="checkbox"/> Copies of IDS Citations			
12. <input type="checkbox"/> Preliminary Amendment			
13. <input checked="" type="checkbox"/> Return Receipt Postcard (MPEP 503) (Should be specifically itemized)			
14. <input type="checkbox"/> Small Entity <input type="checkbox"/> Statement filed in prior application Statement(s) Status still proper and desired			
15. <input type="checkbox"/> Certified Copy of Priority Document(s) (if foreign priority is claimed)			
16. <input type="checkbox"/> Other: _____			
17. If a CONTINUING APPLICATION, check appropriate box and supply the requisite information: <input type="checkbox"/> Continuation <input type="checkbox"/> Divisional <input type="checkbox"/> Continuation-in-part (CIP) of prior application No. ____/____			
18. CORRESPONDENCE ADDRESS			
<input checked="" type="checkbox"/> Customer Number or Bar Code Label		05514 (Insert Customer No. or Attach bar code label here)	
		or <input type="checkbox"/> Correspondence address below	
NAME			
Address			
City	State	Zip Code	
Country	Telephone	Fax	



CLAIMS	(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) CALCULATIONS
	TOTAL CLAIMS (37 CFR 1.16(c))	28-20 =	8	X \$ 18.00 =	\$144.00
	INDEPENDENT CLAIMS (37 CFR 1.16(b))	4-3 =	1	X \$ 78.00 =	\$ 78.00
	MULTIPLE DEPENDENT CLAIMS (if applicable) (37 CFR 1.16(d))			\$260.00 =	\$ 0
				BASIC FEE (37 CFR 1.16(a))	\$690.00
	Total of above Calculations =				\$912.00
	Reduction by 50% for filing by small entity (Note 37 CFR 1.9, 1.27, 1.28).				0
	TOTAL =				\$912.00

19. Small entity status

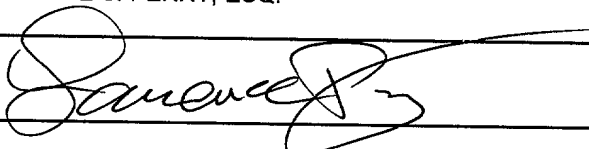
- a. ☐ A Small entity statement is enclosed
- b. ☐ A small entity statement was filed in the prior nonprovisional application and such status is still proper and desired.
- c. ☐ Is no longer claimed.

20. ☒ A check in the amount of \$ 912.00 to cover the filing fee is enclosed.

21. ☐ A check in the amount of \$ _____ to cover the recordal fee is enclosed.

22. The Commissioner is hereby authorized to credit overpayments or charge the following fees to Deposit Account No. 06-1205:

- a. ☒ Fees required under 37 CFR 1.16.
- b. ☒ Fees required under 37 CFR 1.17.
- c. ☐ Fees required under 37 CFR 1.18.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED	
NAME	LAWRENCE S. PERRY, ESQ.
SIGNATURE	
DATE	January 25, 2000

INFORMATION PROCESSING APPARATUS, INFORMATION
PROCESSING METHOD, AND COMPUTER-READABLE
MEMORY MEDIUM STORING PROGRAM THEREIN

5 BACKGROUND OF THE INVENTION

Field of the Invention

The invention relates to information processing
apparatus and method having a printer driver for
controlling a printing apparatus having a print-
10 function to print, for example, outputted print data
onto a paper and eject and a mail-box-function which
can store the print data to a hard disk. The invention
also relates to a computer-readable memory medium which
stores a printer driver program therein.

15 Related Background Art

Hitherto, a printer driver has a print-function
for actually ejecting a paper and printing when a print
job is outputted. On a printing apparatus side, print
data received from an information processing apparatus
20 as a host computer having the printer driver is
analyzed, an output image is formed, and a printing
process is performed.

Among printing apparatuses each having a memory of
a large capacity, there is also a printing apparatus
25 such that received print data is successively and
temporarily spooled in the memory of the large
capacity, a printing order is controlled on the basis

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of priorities and attributes of the print data, and a printing process is sequentially performed from a printer engine.

Further, in the recent printing apparatus, there
5 is considered a mail-box-function such that print data is accumulated in a non-volatile storing unit such as a hard disk or the like of the printing apparatus main body and the printing is instructed from an operation panel of the printing apparatus main body, thereby
10 performing the printing process for the first time.

The printer driver to form the print data, however, does not have the function to form the print data including the instruction such as to accumulate the print data into the printing apparatus main body as
15 mentioned above, so that a mode to accumulate the print data into the memory has to be set by the operation panel of the printing apparatus main body.

SUMMARY OF THE INVENTION

20 It is, therefore, the first object of the invention that in case of using a mail-box-function for a printing apparatus having the mail-box-function, a function to designate a mail box of the printing apparatus as a destination of print data is installed
25 for an information processing apparatus having a printer driver.

The mail-box-function considered in recent years

corresponds to one area that is common to the printing apparatus and a plurality of users accumulate print data into the same mail box (memory). Therefore, when the printing is instructed from the operation panel of the printing apparatus main body, which user's data exists in the mail box is known by the operator and there is a fear such that the print data is erroneously print processed.

It is, therefore, the second object of the invention that a plurality of mail box areas are provided for a printing apparatus and a function which can select any of a plurality of mail boxes of the printing apparatus to be designated as a destination is installed in an information processing apparatus having a printer driver.

When the user selects the print data by operating an operation panel of the printing apparatus main body, a list of data stored in the mail box is displayed. However, the contents to be displayed are a reading (receiving) time, a host name, and a file name based on an application which formed document data. That is, in the case where a Word document of a host name of "hayashi" has been accumulated in the mail box at 14:30 on January. 14, 1999, [19990114_1430 : hayashi : Word document] is displayed on the operation panel. However, in the case where a plurality of files are accumulated in the mail box from the same person, it is

difficult to recognize them as files formed by the same application and there is a fear such that they are erroneously print processed.

It is, therefore, the third object of the invention that a function which can designate a document name that is displayed on the operation panel of the printing apparatus main body is installed in an information processing apparatus having a printer driver.

To accomplish the above objects, therefore, according to the invention, there is provided an information processing apparatus for forming print data which can be interpreted by a printing apparatus in accordance with the document data formed by an application, comprising: setting means for setting either a mail box mode to accumulate the print data into the printing apparatus without printing it or a printer output mode to sequentially print the print data received by the printing apparatus; and forming means for forming the print data by adding information indicative of a destination in the printing apparatus in accordance with the output mode set by the setting means.

Other features and advantages of the present invention will be apparent from the following description taken in conjunction with the accompanying drawings, in which like reference characters designate

the same or similar parts throughout the figures thereof.

BRIEF DESCRIPTION OF THE DRAWINGS

5 Fig. 1 is a block diagram of a print system comprising a host computer and a printer;

 Fig. 2 shows software for printing in the host computer;

 Fig. 3 is a diagram of a memory map upon printing
10 in the host computer or printer setting;

 Fig. 4 is a flowchart for a procedure to set a data destination on a picture plane;

 Fig. 5 is a flowchart for a procedure to set a data destination on the picture plane;

15 Fig. 6 is a diagram showing a data destination setting picture plane;

 Fig. 7 is a diagram showing a device setting picture plane;

 Fig. 8 is a diagram showing a picture plane to
20 discriminate whether a mail box can be used or not;

 Fig. 9 is a diagram showing a picture plane to discriminate whether the mail box can be used or not;

 Fig. 10 is a diagram showing a data destination setting picture plane;

25 Fig. 11 is a diagram showing a data destination setting picture plane;

 Fig. 12 is a diagram showing a data destination

setting picture plane;

Fig. 13 is a diagram showing a message picture plane which is displayed in the case where a data destination is switched to a print-function;

5 Fig. 14 is a diagram showing a message picture plane which is displayed in the case where a data destination is switched to a mail-box-function; and

Fig. 15 is a diagram showing a mail box setting picture plane.

10

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

A print system comprising a printer having a function which can hold print data to a hard disk and a host computer using the printer will now be described
15 as an embodiment of the invention.

[Construction of print system]

Fig. 1 is a block diagram of a print system comprising a host computer 3000 and a printer 1500.

In Fig. 1, reference numeral 3000 denotes the host
20 computer according to the embodiment of an information processing apparatus of the invention. The host computer 3000 has a CPU 1 for executing a document process of a document in which a figure, an image, characters, a table (including a spreadsheet and the
25 like), and the like mixedly exist on the basis of a document processing program or the like stored in a program ROM of an ROM 3. The CPU 1 integrately

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controls each device that is connected to a system bus
4.

An RAM 2 functions as a main memory, a work area,
or the like of the CPU 1. A keyboard controller (KBC)
5 5 controls a key input from a keyboard 9 or a pointing
device (not shown). A CRT controller (CRTC) 6 controls
the display of a CRT display 10. A setting picture
plane of the printer, which will be explained
hereinlater, is also displayed on the CRT 10.

10 A disk controller (DKC) 7 controls an access to an
external memory 11 such as hard disk (HD), floppy disk
(FD), or the like to store a boot program, a printer
driver, various applications, font data, a user file,
an edit file, and the like. A printer controller
15 (PRTC) 8 is connected to the printer 1500 through a
predetermined bidirectional interface (bidirectional
I/F) 21 and executes a communication control process
with the printer 1500. The CPU 1 executes, for
example, a developing (rasterizing) process of an
20 outline font to a display information RAM set on the
RAM 2, thereby enabling WYSIWYG (What you see is what
you get: function for making the display contents
coincident with the print contents) on the CRT 10. The
CPU 1 also executes programs to realize procedures for
25 flowcharts, which will be explained hereinlater, opens
various registered windows on the basis of commands
instructed by a mouse cursor or the like (not shown) on

the CRT 10, and executes various data processes.

In the printer 1500, a CPU 12 integratedly controls accesses to various devices connected to a system bus 15 on the basis of control programs or the like stored in a program ROM of an ROM 13 and outputs an image signal as output information to a printer engine 17 connected through an engine I/F 16.

Besides the mechanism to print, a staple stacker 171 is included in the printer engine 17. Although the staple stacker 171 is provided separately from the printer, since it operates in association with the printer engine, it is regarded as a part of the printer engine 17.

The CPU 12 can communicate with the host computer via the bidirectional I/F 21 and can notify the host computer 3000 of the information or the like in the printer. An RAM 19 functions as a main memory, a work area, or the like of the CPU 12. An input unit 18 controls a communication of status information or the like such as printing state information or the like with the host computer 3000 through the bidirectional I/F 21 and can notify the host computer 3000 of the information or the like in the printer.

A memory controller (MC) 20 controls an access to an external memory 14 such as hard disk (HD), floppy disk (FD), or the like to store a boot program, various applications, font data, a user file, an edit file, and

the like, and print data, which will be explained hereinlater. As for the external memory, a memory area is divided into a plurality of mail boxes, as will be explained hereinlater, and uses them.

5 An operation unit 1501 includes a display panel and a keyboard and allows information to be provided to the operator and allows a printing instruction or a selecting instruction to be inputted from the operator.

[Software construction of host computer]

10 In such a system, a construction on software for allowing the host computer 3000 to print is as shown in Fig. 2.

 An application 201, a graphic engine 202, a printer driver 203, and a system spooler 204 exist as
15 files stored in the external memory 11 and are program modules which are loaded in the RAM 2 and executed by an OS or a module using the module when they are executed.

 The application 201 and printer driver 203 can be
20 added to an FD as an external memory 11 or a CD-ROM (not shown) or can be added to an HD as an external memory 11 via a network (not shown). Although the application 201 stored in the external memory 11 is loaded in the RAM 2 and executed, when the printing is
25 performed from the application 201 to the printer 1500, the application 201 is similarly loaded in the RAM 2 and the outputting (drawing) is performed by using the

graphic engine 202 which can be executed. Although data that is outputted from the application to the graphic engine differs depending on the kind of OS, for example, in case of using Windows (registered trademark of Microsoft Corporation), a GDI function is outputted as a drawing command to a GDI as a graphic engine.

The graphic engine 202 similarly loads the printer driver 203 prepared for every printing apparatus into the RAM 2 from the external memory 11, converts the GDI (Graphic Device Interface) function as an output of the application 201 to a DDI (Device Driver Interface) function, and outputs it to the printer driver 203.

On the basis of the DDI function received from the GDI, the printer driver 203 converts it to a printer control command comprising a PDL (Page Description Language) which can be interpreted by the printer 1500 and image data at a low level. The converted printer control command is outputted to the printer 1500 via the interface 21 through the system spooler 204 loaded in the RAM 2 by the OS. In this instance, the printer driver transmits information to control the mail box to the printer 1500 together with the print data in accordance with a procedure, which will be explained hereinlater.

Fig. 3 shows an example of a memory map in the RAM 2 at the time of printing in the host computer 3000 or at the time of setting of the printer. An application

32 performs the printing by using an OS 36 and a
printing program (printer driver) 35. A BIOS 37 is a
system called a basic input/output system. A program
to drive a parallel interface, a serial interface, or
5 the like which is connected to the printer 1500 is
included in the BIOS 37. Related data 34 includes not
only setting information for printing such as paper
size, layout information, and the like but also setting
information regarding a mail-box-function which is set
10 and used by the printer driver and will be explained
hereinlater.

A data destination setting procedure to use the
mail-box-function will now be described with reference
to flowcharts of Figs. 4 and 5 and display examples of
15 Figs. 6 to 14.

The user sets a method of print processing in
accordance with the printer to be used. As an example
of the setting method, when the user calls a printer
setting which is provided from the operating system
20 (OS) or the like, the printer driver is called from the
OS, a picture plane to set the setting information that
is peculiar to the printer is displayed, and various
items are set on this picture plane. According to the
embodiment, it is assumed that the setting is performed
25 by such a method.

Fig. 6 shows an example of a picture plane of
performing the printer setting when the printer setting

is called by the user. In the example, there are setting items such as general, detail, page setting, finish, paper feed, and the like every setting and the user selects a desired picture plane in accordance with the information to be set.

Fig. 6 shows the example in which a page setting picture plane 601 is selected among the setting items. The user sets each item on this picture plane and sets a data destination by using the pointing device such as a mouse or the keyboard.

Fig. 4 or 5 is a flowchart for a procedure to set the data destination on the picture plane of Fig. 6.

First, in step S401, the CPU 1 executes a "Process for discriminating whether the mail box can be used or not". Fig. 5 is a flowchart for this process.

In step S501, whether the mail box can be used or not is determined by pressing a "Get device information" 701 or a check box 702 indicative of "Use mail box" in Fig. 7.

When the "Get device information" button 701 is pressed, a discrimination result about whether the mail box can be used or not can be automatically obtained from the printer. When the mail box can be used, the box number and the box name of the mail box of the printer are simultaneously obtained.

In the check box 702 of "Use mail box", the user sets whether the mail box can be used or not by the

manual setting.

Fig. 8 shows a state where it is determined that the mail box cannot be used by obtaining the construction information or a state of the check box 702 in Fig. 7 in the case where the user sets a state where the mail box cannot be used by the manual setting.

Fig. 9 shows a state where it is determined that the mail box can be used by getting the construction information or a state of the check box 702 in Fig. 7 in the case where the user sets a state where the mail box can be used by the manual setting.

In next step S502, the CPU 1 discriminates whether the mail box can be used or not from the setting (state of 702 in Fig. 7) of the printer driver. When it is determined that the mail box can be used, in step S504, the icon of an output mode displayed at the upper right position in Fig. 6 is pressed, namely, a mail box button 1001 is set to "Enable" as shown in Fig. 10. The right side of the output mode icon indicates the mail box button 1001 and the left side shows a printer output button.

When it is decided in step S502 that the mail box cannot be used, in step S503, a mail box button 1201 is set to "Disable" as shown in Fig. 12. A display state of the mail box button 1201 is a gray display.

After completion of the process for discriminating

whether the mail box can be used or not in step S401 in Fig. 4, the processing routine advances to a control of the destination.

5 In step S402, the CPU 1 discriminates whether the mail box button has been selected as a destination setting of the printer driver or not.

When the mail box button 1101 is selected as shown in Fig. 11, in step S403, a message of Fig. 14 is displayed to thereby promote the user to set the
10 document name of the data to be transmitted and the box number and the user is allowed to set the document name and the box number on the user interface of the printer driver. The document name is a name for allowing the data stored in the mail box area of the printer main
15 body to be displayed on the operation panel and allowing the user to identify it. For example, it is preferable for the user to set a name by which the contents can be easily known like "Materials for Meeting A" or the like.

20 In step S405, the printer driver sets internal data indicative of the destination to the mail box. When the user wants to set the document name of the data to be transmitted to the mail box, in step S407, a mail box setting button 1102 in Fig. 11 is pressed, a
25 "Set mail box data" dialog box in Fig. 15 is opened and set on the user interface. Although not shown in Fig. 15, the box number and the box name of the mail box are

extracted from the device information obtained in step S501 in Fig. 5 and the box name is set and displayed in correspondence to the box number in Fig. 15. For example, the box number and the box name are displayed in the user interface of the printer driver on the host computer in Fig. 15 in a manner such that the box No. 0 is set to "Common Box", the box No. 1 is set to "First Party", the box No. 2 is set to "Second Party", the box No. 3 is set to "hayashi", the box No. 4 is set to "hosoi", the box No. 5 is set to "yamada", etc.

In step S408, the operator is allowed to designate a document name column 1501 of data to be transmitted and a mail box number column 1502 in Fig. 15, and the designated document name and mail box number are set to the printer driver.

The print data is stored on the basis of the designated box number so as to correspond to the number of mail box obtained by dividing the memory in the hard disk of the printer main body. The designated document name of the print data is registered in a management table in the printer. The box number and the data document name which are designated by the user in step S408 are displayed on the operation panel 1501 of the printer main body and can be confirmed.

When a printer output button is selected as shown in Fig. 10 as a discrimination result in step S402, a message of Fig. 13 is displayed in step S404 and the

internal data of the destination is set to the printer in step S406.

After the mail box or printer is set as a destination, in step S409, print data comprising a PDL
5 (Page Description Language) or image data at a low level is formed on the basis of a print quality or print style which has been set by the printer driver, and further, the internal data showing the destination. The printer driver adds information indicative of the
10 destination (mail box number or direct output) in the printing apparatus, forms the print data, and transmits the formed print data to the printing apparatus.

The invention can be applied to a system comprising a plurality of apparatuses (for example, a
15 host computer, interface equipment, a reader, a printer, and the like) or can be also applied to an apparatus comprising one equipment.

The objects of the invention can be also accomplished by a method whereby a memory medium in
20 which program codes of software to realize the functions of the embodiment mentioned above have been stored is fed to a system or an apparatus and a computer (or a CPU or an MPU) of the system or apparatus reads out and executes the program codes
25 stored in the memory medium.

In this case, the program codes themselves read out from the memory medium realize the novel functions

of the invention and the memory medium in which the program codes have been stored constructs the invention.

As a memory medium to supply the program codes,
5 for example, it is possible to use a floppy disk, a hard disk, an optical disk, a magnetooptic disk, a CD-ROM, a CD-R, a magnetic tape, a non-volatile memory card, an ROM, or the like.

The invention also incorporates not only a case
10 where the computer executes the read-out program codes, so that the functions of the embodiment are realized, but also a case where an OS (Operating System) or the like which operates on the computer executes a part or all of the actual processes on the basis of
15 instructions of the program codes, and the functions of the embodiment mentioned above are realized by those processes.

Further, the invention also incorporates a case where the program codes read out from the memory medium
20 are written in a memory provided for a function expanding board inserted in the computer or a function expanding unit connected to the computer and, thereafter, a CPU or the like provided for the function expanding board or function expanding unit executes a
25 part or all of the actual processes on the basis of the instructions of the program codes, and the functions of the embodiment mentioned above are realized by the

processes.

The program codes themselves which are installed to the computer in order to realize the functions and processes of the invention by the computer also realize
5 the invention. That is, the computer programs themselves to realize the functions and processes of the invention are included in Claims of the invention.

As a method of supplying the computer program, the invention is not limited to the case where they are
10 stored in an FD or a CD-ROM and read out by the computer and installed therein as mentioned above. The computer is connected to a homepage of the Internet by using a browser of the client computer and the computer program itself of the invention or a compressed file
15 including an automatic installing function is downloaded from the homepage, so that the computer programs can be supplied. The invention can be also realized by a method whereby the program codes constructing the program of the invention are divided
20 into a plurality of files and each file is downloaded from a different homepage. That is, a WWW server for downloading the program file to realize the functions and processes of the invention by the computer to a plurality of users is also incorporated in Claims of
25 the invention.

The invention can be also realized by a method whereby the program of the invention is enciphered and

stored in a memory medium such as an FD or the like and distributed to the user, key information to decrypt is downloaded from the homepage through the Internet to the user who can clear predetermined conditions, and
5 the enciphered program is executed by using the key information and installed to the computer.

As described above, according to the invention, in case of using the mail-box-function for the printing apparatus having the mail-box-function, the function to
10 designate the mail box of the printing apparatus as destination of the print data is installed in the information processing apparatus having the printer driver. Therefore, the control mode can be switched to a mode of setting the destination to the mail box or
15 the mode to print the print data as it is without setting such a mode by the operation panel of the printing apparatus main body, and the user can easily handle the mail box.

In the information processing apparatus having the
20 printer driver, since which one of a plurality of mail boxes of the printing apparatus is designated as destination can be selected, the mail box divided per application can be efficiently used and the security to the print data in the mail box is improved.

25 In the information processing apparatus having the printer driver, since the document name to be displayed on the operation panel of the printing apparatus main

body can be designated by the printer driver, when the printing process of the print data stored in the mail box is performed by the operation panel of the printing apparatus main body, the operator can easily

5 discriminate the print data of a desired document. The
printing is not vainly performed and the mail-box-
function can be easily handled by the operator.

As many apparently widely different embodiments of the present invention can be made without departing from the spirit and scope thereof, it is to be understood that the invention is not limited to the specific embodiments thereof except as defined in the appended claims.

WHAT IS CLAIMED IS:

1. An information processing apparatus for forming
print data which can be interpreted by a printing
apparatus in accordance with document data formed by an
5 application, comprising:

setting means for setting either a mail box mode
to accumulate the print data into said printing
apparatus without printing it or a printer output mode
to sequentially print the print data received by said
10 printing apparatus; and

forming means for forming said print data by
adding information indicative of a destination in said
printing apparatus in accordance with the output mode
set by said setting means.

15

2. An apparatus according to claim 1, further
comprising:

display control means for, in the case where a
mail-box-function of said printing apparatus cannot be
20 used, displaying so as to make it possible to identify
that a user interface to set the mail box mode by said
setting means cannot be used.

3. An apparatus according to claim 2, further
25 comprising obtaining means for obtaining device
information from said printing apparatus,

and wherein said display control means displays

and controls whether the user interface to set the mail box mode can be used or not on the basis of said obtained device information.

5 4. An apparatus according to claim 3, further comprising box designating means for designating to which one of a plurality of mail box areas in said printing apparatus said print data is outputted when a mail box output is performed,

10 and wherein said box designating means displays a mail box list including a box number and a box name and designates on the basis of the device information obtained by said obtaining means.

15 5. An apparatus according to claim 2, further comprising manual setting means for setting whether a mail box can be used or not on the user interface of a printer driver,

20 and wherein said display control means displays and controls whether the user interface to set the mail box mode can be used or not on the basis of the setting by said manual setting means about whether the mail box can be used or not.

25 6. An apparatus according to claim 2, wherein when the output mode is switched by said setting means, said display control means displays a message indicating

that there is a change of the destination.

7. An apparatus according to claim 1, further comprising name designating means for designating a
5 name of the print data to be transmitted to said printing apparatus when the mail box mode is selected by said setting means,

and wherein said name is a name to be displayed on an operation panel of said printing apparatus.

10 8. An information processing method of forming print data which can be interpreted by a printing apparatus in accordance with document data formed by an application, comprising:

15 a setting step of setting either a mail box mode to accumulate the print data into said printing apparatus without printing it or a printer output mode to sequentially print the print data received by said printing apparatus; and

20 a forming step of forming said print data by adding information indicative of a destination in said printing apparatus in accordance with the output mode set by said setting step.

25 9. A method according to claim 8, further comprising:

a display control step of, in the case where a

mail-box-function of said printing apparatus cannot be used, displaying so as to make it possible to identify that a user interface to set the mail box mode in said setting step cannot be used.

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10. A method according to claim 9, further comprising an obtaining step of obtaining device information from said printing apparatus,

and wherein in said display control step, whether
10 the user interface to set the mail box mode can be used or not is displayed and controlled on the basis of said obtained device information.

11. A method according to claim 10, further
15 comprising a box designating step of designating to which one of a plurality of mail box areas in said printing apparatus said print data is outputted when a mail box output is performed,

and wherein in said box designating step, a mail
20 box list including a box number and a box name is displayed and the designation is performed on the basis of the device information obtained in said obtaining step.

25 12. A method according to claim 9, further comprising a manual setting step of setting whether a mail box can be used or not on the user interface of a

printer driver,

and wherein in said display control step, whether the user interface to set the mail box mode can be used or not is displayed and controlled on the basis of the setting in said manual setting step about whether the mail box can be used or not.

13. A method according to claim 9, wherein when the output mode is switched in said setting step, a message indicating that there is a change of the destination is displayed in said display control step.

14. A method according to claim 8, further comprising a name designating step of designating a name of the print data to be transmitted to said printing apparatus when the mail box mode is selected in said setting step,

and wherein said name is a name to be displayed on an operation panel of said printing apparatus.

15. A computer-readable memory medium which stores a printer driver program for forming print data which can be interpreted by a printing apparatus in accordance with document data formed by an application, wherein said program comprises:

a code for setting either a mail box mode to accumulate the print data into said printing apparatus

without printing it or a printer output mode to sequentially print the print data received by said printing apparatus; and

5 a code for forming said print data by adding information indicative of a destination in said printing apparatus in accordance with said set output mode.

10 16. A medium according to claim 15, wherein said printer driver program further comprises:

15 a display control code for, in the case where a mail-box-function of said printing apparatus cannot be used, displaying so as to make it possible to identify that a user interface to set the mail box mode by said setting code cannot be used.

20 17. A medium according to claim 16, wherein said printer driver program further comprises an obtaining code for obtaining device information from said printing apparatus,

and said display control code displays and controls whether the user interface to set the mail box mode can be used or not on the basis of said obtained device information.

25

18. A medium according to claim 17, wherein said printer driver program further comprises a box

designating code for designating to which one of a plurality of mail box areas in said printing apparatus said print data is outputted when a mail box output is performed,

5 and said box designating code displays a mail box list including a box number and a box name and designates on the basis of the device information obtained by said obtaining code.

10 19. A medium according to claim 16, wherein said printer driver program further comprises a manual setting code for setting whether a mail box can be used or not on its own user interface,

15 and said display control code displays and controls whether the user interface to set the mail box mode can be used or not on the basis of the setting by said manual setting code about whether the mail box can be used or not.

20 20. A medium according to claim 16, wherein when the output mode is switched by said setting code, said display control code displays a message indicating that there is a change of the destination.

25 21. A medium according to claim 15, wherein said printer driver program further comprises a name designating code for designating a name of the print

data to be transmitted to said printing apparatus when the mail box mode is selected by said setting code, and said name is a name to be displayed on an operation panel of said printing apparatus.

5

22. A printer driver program for forming print data which can be interpreted by a printing apparatus in accordance with document data formed by an application, comprising:

10 a code for setting either a mail box mode to accumulate the print data into said printing apparatus without printing it or a printer output mode to sequentially print the print data received by said printing apparatus; and

15 a code for forming said print data by adding information indicative of a destination in said printing apparatus in accordance with said set output mode.

20 23. A program according to claim 22, further comprising:

a display control code for, in the case where a mail-box-function of said printing apparatus cannot be used, displaying so as to make it possible to identify
25 that a user interface to set the mail box mode by said setting code cannot be used.

24. A program according to claim 23, further comprising an obtaining code for obtaining device information from said printing apparatus,

5 and wherein said display control code displays and controls whether the user interface to set the mail box mode can be used or not on the basis of said obtained device information.

25. A program according to claim 24, further comprising a box designating code for designating to which one of a plurality of mail box areas in said printing apparatus said print data is outputted when a mail box output is performed,

10 and wherein said box designating code displays a mail box list including a box number and a box name and designates on the basis of the device information obtained by said obtaining code.

26. A program according to claim 23, further comprising a manual setting code for setting whether a mail box can be used or not on its own user interface,

20 and wherein said display control code displays and controls whether the user interface to set the mail box mode can be used or not on the basis of the setting by said manual setting code about whether the mail box can be used or not.

27. A program according to claim 23, wherein when the output mode is switched by said setting code, said display control code displays a message indicating that there is a change of the destination.

5

28. A program according to claim 22, further comprising a name designating code for designating a name of the print data to be transmitted to said printing apparatus when the mail box mode is selected by said setting code,

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and wherein said name is a name to be displayed on an operation panel of said printing apparatus.

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ABSTRACT OF THE DISCLOSURE

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FIG. 1

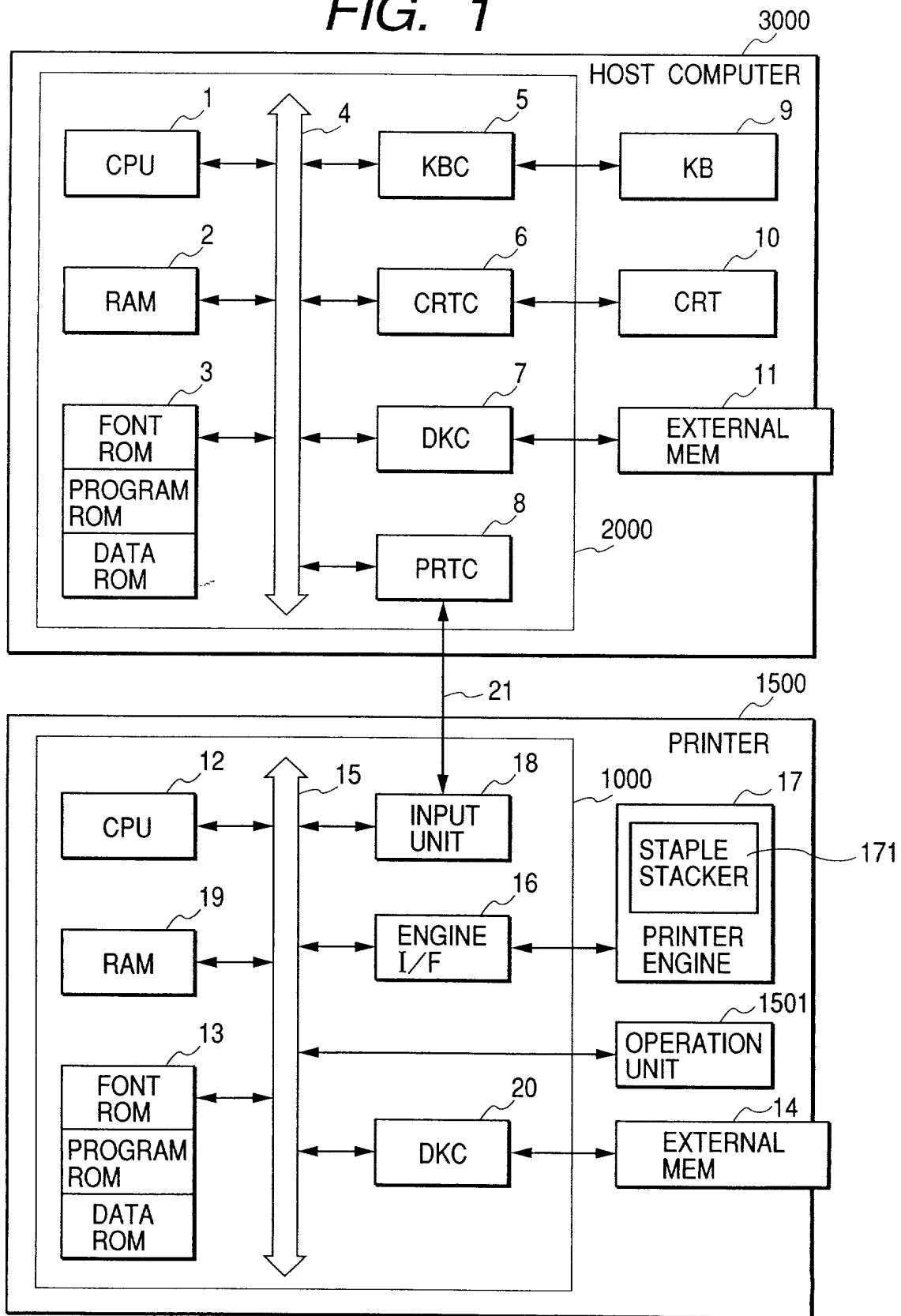


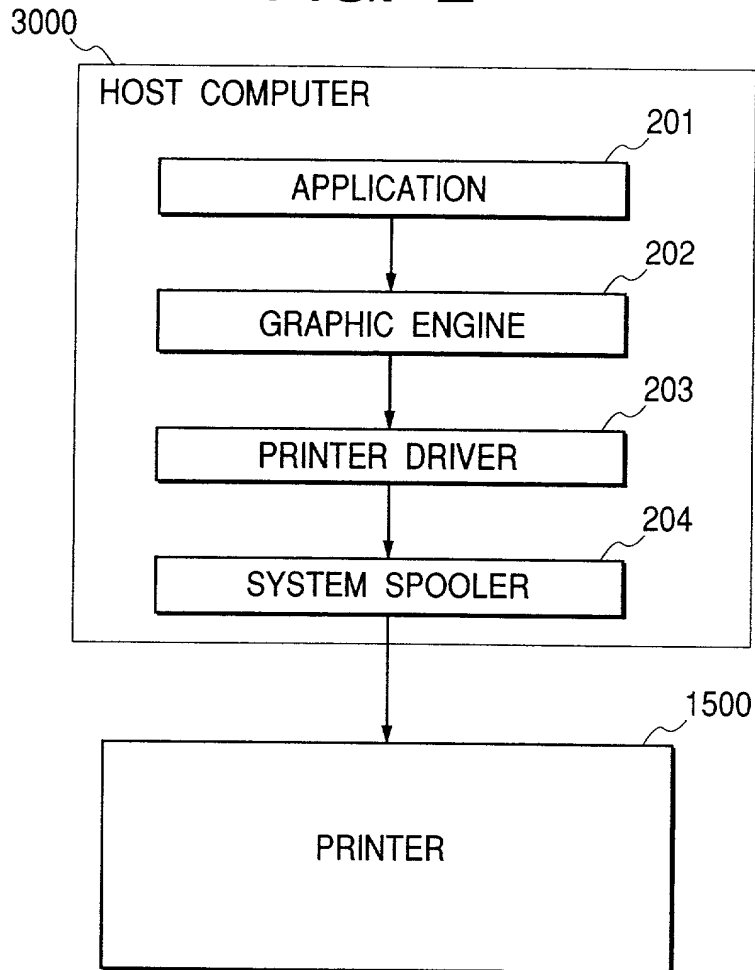
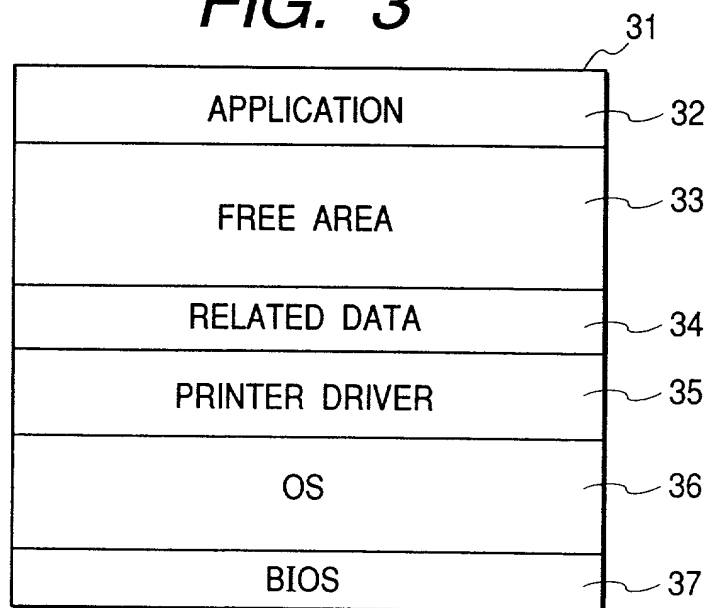
FIG. 2**FIG. 3**

FIG. 4

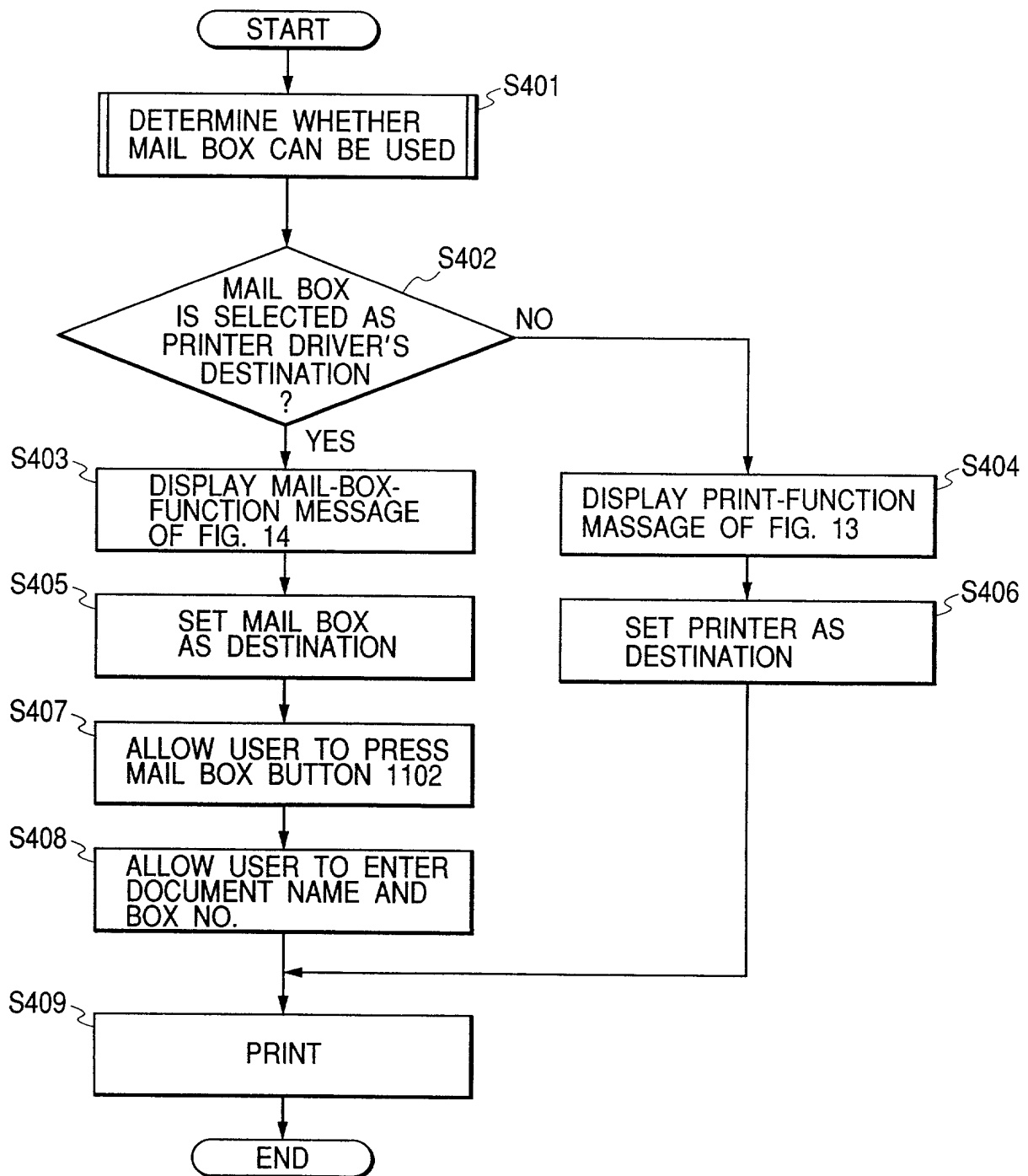


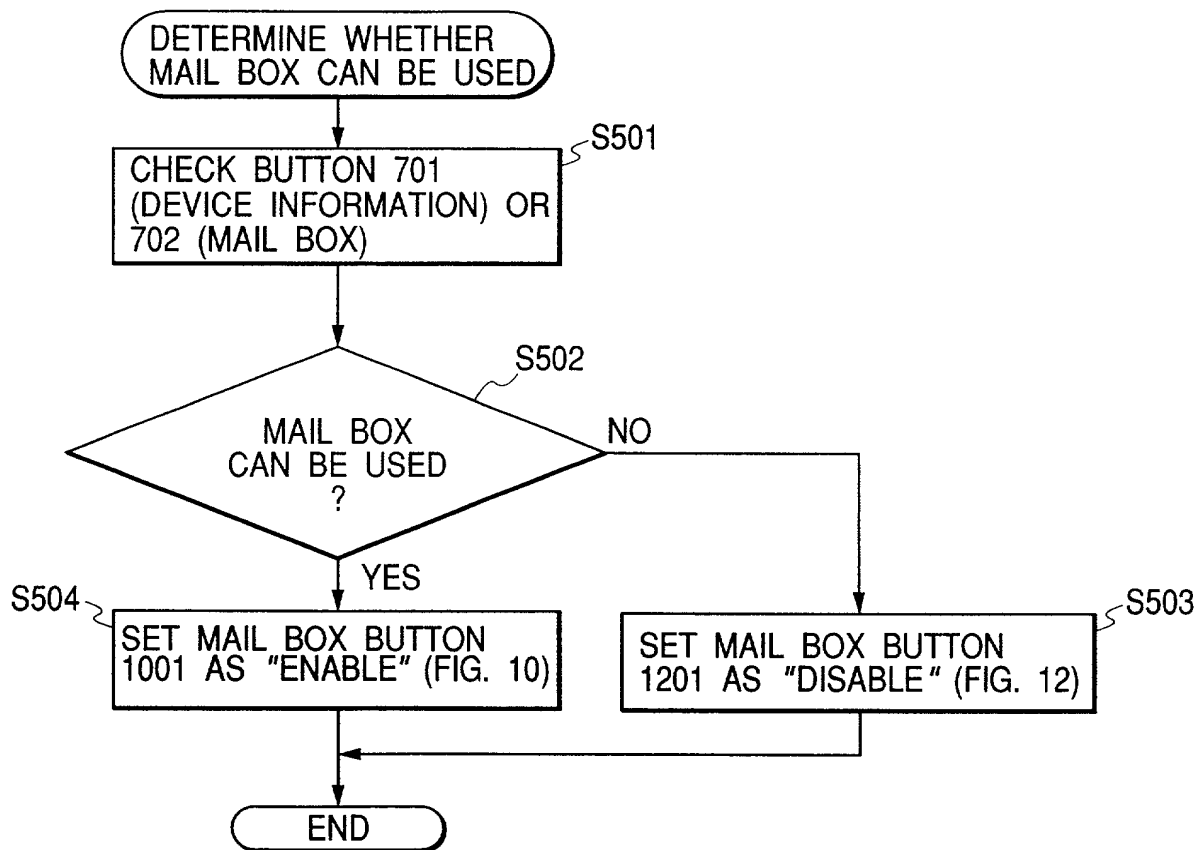
FIG. 5

FIG. 6

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GENERAL	DETAIL	COMMON	PAGE SETTING	FINISH	PAPER FEED	PRINT QUALITY	DEVICE SETTING
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FAVORITE (F) : STANDARD ▼ ADD (D)..... EDIT (E).....

A4 (ZOOM : AUTO)

ORIGINAL SIZE (G) : A4 ▼
 PAPER SIZE (O) : SAME AS ORIGINAL ▼
 NO. OF COPIES (C) : 1 ▲▼ (1 - 255)
 PRINT DIRECTION : ● PORTRAIT (T) ○ LANDSCAPE (S)

 PAGE LAYOUT (L) : 1 PAGE / SHEET (STANDARD) ▼
☐ ZOOM (M) : 100 ▲▼ %

☐ STAMP (W) : SECRET ▼

STAMP-EDIT (Z).....

USER-DEFINED PAPER (U).....	PAGE OPTION (N).....	RETURN TO STANDARD (R)
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OK

CANCEL

APPLY (A)

HELP

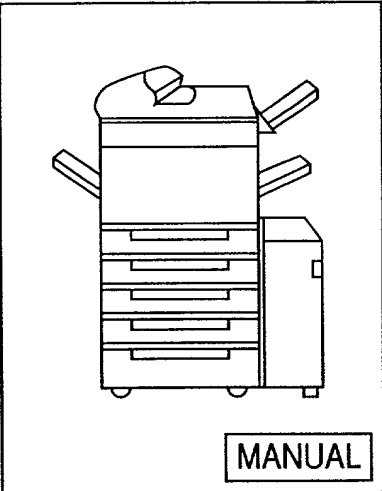
FIG. 7

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☒ 2-CASSETTE PEDESTAL (2)

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☐ 4-CASSETTE PEDESTAL (4)

PAPER EJECTION OPTION (O) :

NONE ▼

LIPS EXPANSION MEM (M) : 0 MB ▼

☐ USE MAIL BOX (X) : ~ 702

INTERNAL SPOOLING (P) :

AUTO ▼

FONT SETTING (F).....

PAPER FEED & PAPER ASSIGNMENT (T).....

701 ~

GET DEVICE INFORMATION (G)

OK

CANCEL

APPLY (A)

HELP

FIG. 8



FIG. 9



FIG. 10

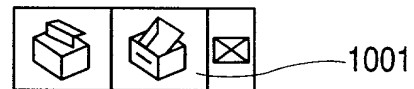


FIG. 11

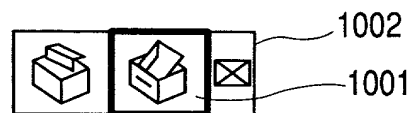


FIG. 12

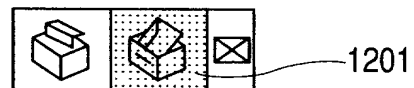


FIG. 13

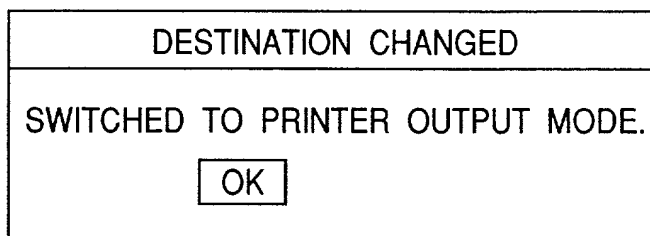


FIG. 14

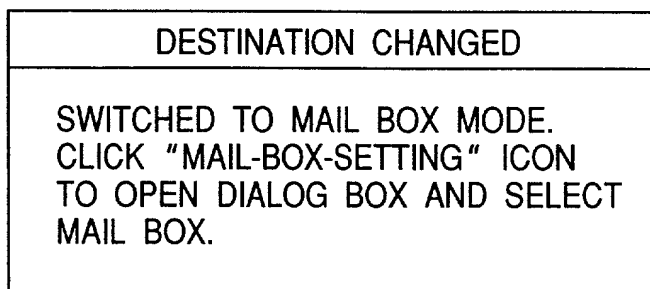


Figure 1 is a screenshot of a "SET MAIL BOX DATA" dialog box. The dialog box has a title bar with a question mark and a close button. It contains two input fields: "DOCUMENT NAME (D):" and "SELECT MAIL BOX (B):". Below the second field is a list box with a vertical scrollbar. The list box has a header row with "BOX NO." and "BOX NAME". The "BOX NO." column contains numbers 0 through 9. The "BOX NAME" column is empty. At the bottom of the dialog are three buttons: "OK", "CANCEL", and "HELP (H)". Reference numerals 1501 and 1502 point to the "DOCUMENT NAME (D):" field and the list box, respectively.

COMBINED DECLARATION AND POWER OF ATTORNEY
FOR PATENT APPLICATION
(Page 1)

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled INFORMATION PROCESSING APPARATUS, INFORMATION PROCESSING METHOD, AND COMPUTER-READABLE MEMORY MEDIUM STORING PROGRAM THEREIN, the specification of which is attached hereto.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR §1.56.

I hereby claim foreign priority benefits under 35 U.S.C. §119(a)-(d) or §365(b), of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application which designates at least one country other than the United States, listed below and have also identified below any foreign application for patent or inventor's certificate, or PCT international application having a filing date before that of the application on which priority is claimed:

<u>Country</u>	<u>Application No.</u>	<u>Filed (Day/Mo./Yr.)</u>	<u>(Yes/No)</u> <u>Priority Claimed</u>
JAPAN	11-021683	JANUARY 29, 1999	YES

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or § 365(c) of any PCT international application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

<u>Application No.</u>	<u>Filed (Day/Mo./Yr.)</u>	<u>Status (Patented, Pending, Abandoned)</u>
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I hereby appoint the practitioners associated with the firm and Customer Number provided below to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith, and direct that all correspondence be addressed to the address associated with that Customer Number:

FITZPATRICK, CELLA, HARPER & SCINTO
Customer Number: 05514

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of Sole or First Inventor EIJI HAYASMI

Inventor's signature _____

Date _____

Citizen/Subject of JAPAN

Residence 21-11, SHUKUGAWARA 2-CHOME, TAMA-KU, KAWASAKI-SHI, KANAGAWA-KEN, JAPAN